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May 07, 2010

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: ET Docket No. 08-59 – In the Matter of Amendment of the Commission’s Rules to Provide Spectrum for the Operation of Medical Body Area Networks

Dear Ms. Dortch:

The Notice of Proposed Rulemaking (“Notice”) in the above-referenced matter sought comment on allocating spectrum and establishing service and technical rules for the operation of Medical Body Area Network (“MBAN”) systems using body sensor devices.

In the Notice GE Healthcare (“GEHC”) has proposed to the Federal Communications Commission (“Commission”) the allocation of up to 40 Megahertz of spectrum in the 2360 to 2400 MHz for the use of wireless MBAN.

Zarlink Semiconductor Inc. (“Zarlink”) fully supports the introduction of spectrum for MBANs in view of the growing demand for and the health and cost benefits brought by such technology, and the limitations and disadvantages of current wired patient monitoring technologies.

Following further consideration of application requirements, Zarlink hereby revises its previous recommendations (letter dated October 5, 2009) as follows:

Whilst we initially recommended consideration of the band 2483.5 to 2500 MHz due to the possibility of international usage and harmonization we now consider the original GEHC proposal of 2360-2400 MHz to be the preferred spectrum for MBAN devices within the region from 2.36 to 2.5 GHz.

The band 2483.5-2500 MHz is used in the US for MSS (space-to-Earth) and radiodetermination-satellite (space-to-Earth) services on a primary basis, and is designated for industrial, scientific and medical (ISM) applications. The 2483.5-2500 MHz band may also be used by grandfathered stations in the broadcast auxiliary service (BAS) and private radio service per non-Federal Government footnote (FCC 04-134 - NG147). The band 2495 to 2500 MHz is a subset of the larger band 2483.5-2500 MHz that allows for the above services as well as fixed mobile communications. In particular, it has been effectively integrated with Broadband Radio Service (BRS) in the region 2500 to 2690 MHz (see FCC 04-135) and the widespread use of such services does not lend this spectrum to MBAN use.

Effectively, the bandwidth available for consideration is the region from 2483.5 MHz to 2495 MHz. Further recent consideration and analysis of clinical MBAN applications indicates this bandwidth allowance (11.5 MHz) is insufficient for reliable operation in a hospital environment. A minimum of 30 channels, and ideally 40 for reliable operation, is required to support multiple sensors and patients in relatively close proximity. Given that a channel bandwidth of up to 1MHz is needed to support the data rate and power consumption requirements of BAN wireless sensor nodes (consistent with GEHC analysis as well as current IEEE 802.15.6 draft), we believe that a minimum of 30 MHz, and up to 40 MHz as per the GEHC proposal, should be allocated to MBAN.

On this basis, we (1) withdraw our proposal for consideration of the band 2483.5 to 2500 MHz and support fully the proposal for MBAN spectrum in the wider region 2360-2400 MHz. and (2) recommend a channelization that ensures 40 channels with a 1 MHz channel bandwidth.

Zarlink has been a leading provider of integrated circuits for medical applications including implantable devices and external sensors for over 30 years, and has a leading position in the design, manufacturing and supply medical wireless telemetry solutions. We would be pleased to make ourselves available to the Commission to discuss this submission further, and/or answer questions, provide technical data and other information which could be of use in this Notice.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Swift", written in a cursive style.

Stephen J. Swift
Senior Vice President & General Manager
Medical Communications Product Group
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